

the process will not decrease soluble  $\beta$ -glucan by more than 20 wt% compared to the yield from the corresponding source of non-germinated cereal or mixture of cereals. The process includes the steps of treating at least one cereal by heating to reduce  $\beta$ -glucanase activity in the treated cereal. An aqueous cereal slurry containing from 10% to 30% by weight of the treated cereal is formed, the cereal being wet or dry milled. The slurry is mashed at a temperature above 50°C in the presence of at least one starch degrading enzyme and at least one protein degrading enzyme.

In contrast to the present invention as recited in amended claim 1, Kong et al. teaches the production of a wort from a variety of cereals by consecutively treating a corresponding cereal powder suspended in aqueous calcium chloride at a temperature of 40°C to 60°C with a first enzyme composition and a second enzyme composition ("enzyme group"). In between these treatments, the suspension is heated up to 75°C to 95°C. The first enzyme composition includes an amylase and a protease. The second enzyme composition includes an isoamylase, a saccharogenic enzyme and a protease. The wort thus obtained can be fermented in a continuous or discontinuous fermentation process. Kong et al. does not teach or suggest a step of treating a cereal to reduce  $\beta$ -glucanase activity. Moreover, Kong et al. does not teach or suggest a process in which the  $\beta$ -glucanase activity of any ingredient employed in the process will not decrease soluble  $\beta$ -glucan by more than 20% by weight. On the contrary, the process disclosed by Kong et al. is intended to produce a beer that is free from carcinogens by avoiding the use of barley malt, which is said to contain nitrosodimethylamine, by a rapid, inexpensive and continuous production process. Thus, Kong et al. does not anticipate or render obvious the present invention as recited in amended claim 1, which recites a process for producing beer in which high soluble  $\beta$ -glucan content is maintained.

Lindahl et al. does not cure the deficiencies of Kong et al. Lindahl et al. discloses a stable cereal suspension prepared from a steam-treated oat material. The Lindahl et al. process teaches the consecutive use of the starch degrading enzymes  $\beta$ -amylase and  $\alpha$ -amylase while excluding enzymic activity of glucanase and protease. The Lindahl et al. process lacks an enzyme activity destroying step between the two enzymatic

degradation steps. The Lindahl et al. oats suspension product thus is substantially different from the Kong et al. wort product. In particular, the protein content of the oats raw material is preserved in the Lindahl et al. product but would not be so in the wort produced by the process disclosed by Kong et al. if oat meal were used as a raw material. This difference alone is sufficient to make the Lindahl et al. product unsuitable as a "wort" for use in brewing. Consequently, there is no motivation to combine the references as would be required for a rejection under § 103. Further, Applicant notes the Examiner's earlier agreement that including a protein degrading enzyme removed Lindahl et al. from the prior art. See the Interview Summary of February 16, 2001. Applicant respectfully submits that Lindahl et al., taken alone or in combination, does not anticipate or render obvious the present invention.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

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Respectfully submitted,

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**Version With Markings to Show Changes Made**

1. (Amended) A process for the production of a cereal wort or beer having a high content of soluble  $\beta$ -glucan of more than 0.2 wt % from a cereal or mixture of cereals in which the  $\beta$ -glucanase activity of any ingredient employed in the process will not decrease soluble  $\beta$ -glucan by more than 20 wt% compared to the yield from the corresponding source of non-germinated cereal or mixture of cereals, the process comprising the steps of:  
treating at least one cereal by heating to reduce  $\beta$ -glucanase activity in the treated cereal;

forming an aqueous cereal slurry containing from 10% to 30% by weight of the treated cereal, the cereal being wet or dry milled; and

mashing the slurry at a temperature above 50°C in the presence of at least one starch degrading enzyme and at least one protein degrading enzyme.

22. (Amended) A process for the production of a cereal wort or beer having a high content of soluble  $\beta$ -glucan of more than 0.2 wt % from a cereal or mixture of cereals, the process comprising the steps of:

treating the cereal or mixture of cereals by heating to reduce  $\beta$ -glucanase activity in the treated cereal;

utilizing enzymes during the process having  $\beta$ -glucanase activity sufficient only to eliminate from the treated cereal or mixture of cereals not more than 50% of soluble  $\beta$ -glucan which is contained before the process is effected in the cereal or mixture of cereals.